

**ACOUSTICAL ANALYSIS ASSOCIATES, INCORPORATED**

**AAAI Report 1280  
AAAI Project 88018**

# **QUARTERLY NOISE MONITORING AT BURBANK AIRPORT FOURTH QUARTER 2003**

**MARCH 2004**

**Prepared for:**

**BURBANK  
GLENDALE  
PASADENA  
AIRPORT** 

AAAI Report 1280  
AAAI Project 88018

QUARTERLY NOISE MONITORING  
AT BURBANK AIRPORT  
FOURTH QUARTER 2003

MARCH 2004

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## QUARTERLY NOISE MONITORING AT BURBANK AIRPORT FOURTH QUARTER 2003

### I. INTRODUCTION

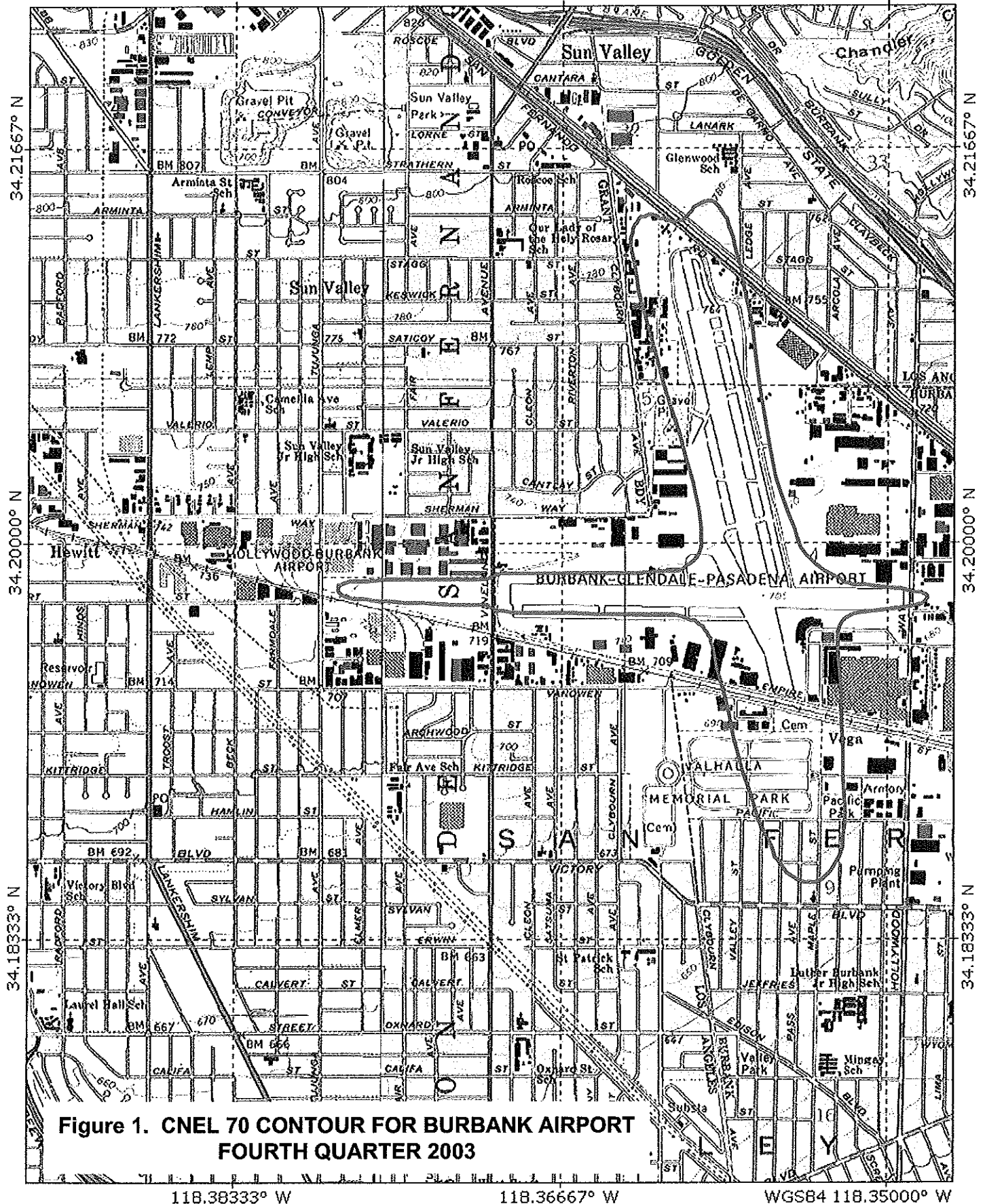
In compliance with the California Noise Standards (Reference 1) and the current variance from certain provisions of the Standards (Reference 2), the operator of the Burbank Airport is required to perform noise monitoring in the vicinity of the airport for the purpose of establishing a noise impact boundary. The Noise Standards currently specify a community noise equivalent level (CNEL) of 65 dB for the noise impact boundary<sup>1</sup>. The airport is required to provide, each quarter, an updated annual noise impact contour based on measurement data over the four preceding quarters.

A permanent noise monitoring system became operational in April 1980 and, with brief interruption for system expansion, maintenance, and program changes, has been operational since that time. Of the original nine noise monitor sites, eight have remained unchanged since 1980. The monitor at site 8 was removed in 1997 and replaced by a monitor at site 18. Two sites were added east of the airport in late 1980. Four sites were added south of the airport in January 1986 in response to the requirement to determine the 65 dB contour. Three more locations were added in February 1997. Two of these, identified as 16 and 17, are south of the airport, and one, 18, is to the west. The site to the west replaces Site 8. These locations were added to permit monitoring closer to the 65 dB contour. The noise monitoring computer at the airport was replaced in August 1995.

This report describes the data acquired by the monitoring system during the fourth quarter of 2003. Noise impact boundaries for 65 dB and 70 dB are shown based on these measurements and measurements obtained during the first, second, and third quarter of 2003 reported in References 3, 4 and 5. Figure 1 shows the 70 dB contour and Figure 2 shows the 65 dB contour, based on the measured noise data.

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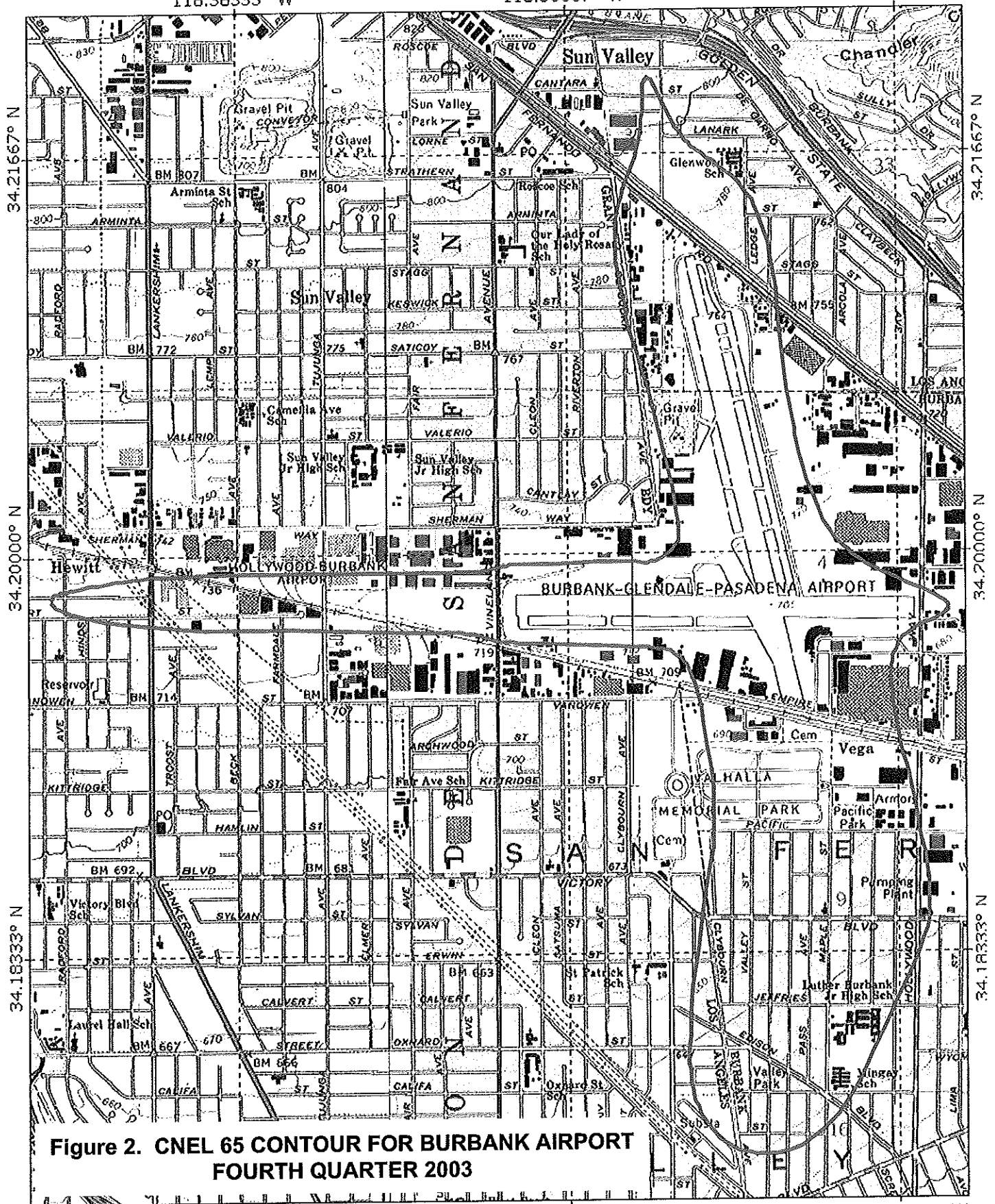
1 Prior to January 1, 1986, a CNEL of 70 dB defined the noise impact boundary.



**Figure 1. CNEL 70 CONTOUR FOR BURBANK AIRPORT  
 FOURTH QUARTER 2003**

TN 134°  
 MN

118.38333° W 118.36667° W WGS84 118.35000° W  
 0 1000 FEET 0 500 1000 METERS  
 Printed from TOPOI ©2000 National Geographic Holdings (www.topo.com)



**Figure 2. CNEL 65 CONTOUR FOR BURBANK AIRPORT  
 FOURTH QUARTER 2003**

TN\* / MN  
 13 1/2°

118.38333° W

118.36667° W

WGS84 118.35000° W

0 5 1 MILE  
 0 1000 FEET 0 500 1000 METERS

Printed from TOPOI ©2000 National Geographic Holdings (www.topoi.com)

## II. NOISE MEASUREMENTS

### A. Sites

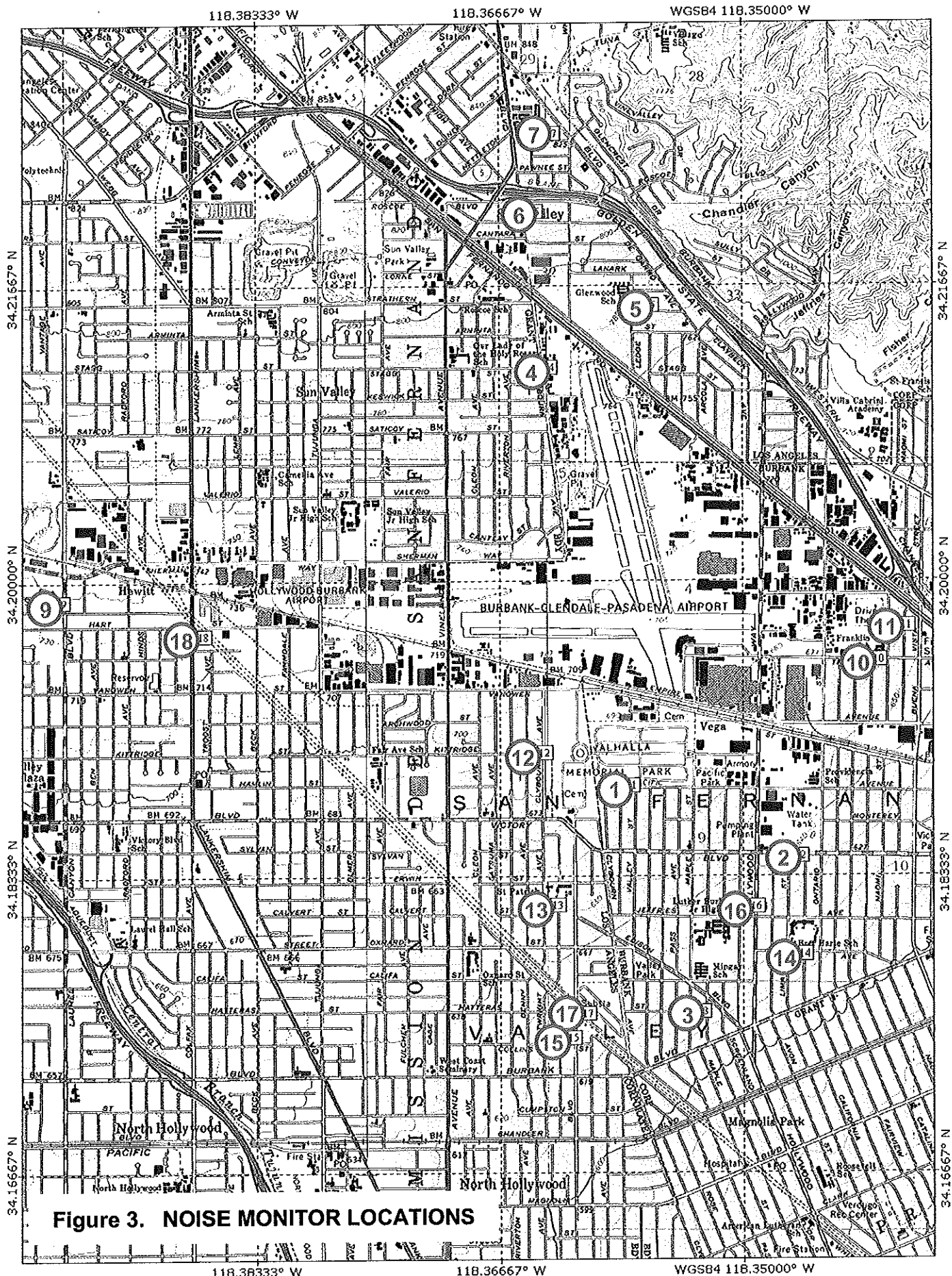
Aircraft noise levels were monitored at 15 locations prior to February, 1997. Two sites were added in February 1997, and equipment at one site west of the airport was moved to a new location. In July 2003, the monitor station at site 9 was moved 105 feet further west to accomodate new construction at the Fire Station. The noise monitor sites are shown in Figure 3.

### B. Noise Measurement Equipment

Each of the microphone locations uses an identical set of equipment connected to a central control unit. The noise level at each site is digitized and transmitted by phone line to the central site. The computer at the central site processes the data to produce (among other measures) the CNEL at each site. Appendix A provides a brief description of the system.

### C. Noise Data

Electrical power and phone line interruptions occurred several times during the quarter resulting in loss of data. In particular, the noise monitor at site 9 was off-line for 24 hours at the beginning of July during the move to the new location. More importantly, construction equipment activity within 100 feet of the microphone interfered with aircraft noise measurements during daytime hours for several weeks in August and September. Tables 1, 2, and 3 show each site monitoring RMS "OFF" if the site was operating for less than 94% of the time. The data for these days were excluded from the averages.



**D. Operational Data**

Detailed departure and arrival logs are provided by the airlines. Operations of other jet aircraft are determined from air traffic strips provided by the FAA at Burbank Tower. In addition, flight schedules and logs of nighttime operations are provided by airport personnel.

**III. MEASURED NOISE DATA**

Daily CNEL values for the noise monitoring system are listed in Tables 1, 2, and 3. Table 4 lists the average values for each quarter together with the annual average.

**IV. SCHEDULED AIRLINE AND COMMUTER OPERATIONS**

The scheduled air carrier and commuter operations for the quarter are shown in Table 5.

**V. CNEL CONTOUR DEVELOPMENT**

The contours shown in Figures 1 and 2 are based upon computer-generated "master" contours which are adjusted to reflect the monitoring data. This third quarter 2003 used the master contours produced by Version 6.1 of the Integrated Noise Model (INM), a sophisticated aircraft noise modeling program developed for the Federal Aviation Administration. Inputs to the program consist of aircraft types and performance data, flight paths, numbers of operations, and day/evening/night distribution of flights. The program calculates CNEL values at equally spaced grid points and produces CNEL contour lines at 1 dB intervals. The annual average CNEL values at each site were marked at the appropriate locations on the contour map and the locations of the 65 and 70 dB CNEL contours were determined in the vicinity of each measuring point. These points were then joined following the general shape of the computed contours.

The master contours, used in developing the contours for this quarter are based on operations for the 12-month period from January 2002 through December 2002. This replaced the previous master set of CNEL Contours which were based on operations for the 12-month period from January 1998 through December 1998.

# Fax

**To:** Dennis O'Connor  
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**From:** Mike Bucka  
**Pages:** 7, including this cover sheet.  
**Date:** April 12, 2004  
**Subject:** 4th Qtr. 2003 Report



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**Hard Copy to Follow:** (X)No ( )Yes →→→→→ ( )Via Mail ( )Via Courier ( ) Via FedEx

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## AAAI Report 1280

## Acoustical Analysis Associates, Inc.

TABLE 1. CNEL VALUES FOR OCTOBER 2003

	RMS NUMBER																	
DATE	1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	17	18	
10/01/03	66.3	63.4	63.6	58.7	65.1	59.3	60.5	64.2	53.7	49.7	54.3	62.6	59.2	63.6	63.8	63.3	64.7	
10/02/03	70.3	64.7	66.4	63.6	67.3	58.5	61.6	65.3	60.6	55.8	59.8	66.3	61.0	65.3	66.1	65.4	65.8	
10/03/03	68.1	65.9	67.4	63.1	69.6	58.7	61.4	65.8	58.7	54.9	58.7	64.7	63.1	65.9	68.0	65.5	66.8	
10/04/03	67.6	65.2	64.7	63.2	66.1	62.9	62.8	65.0	60.4	58.4	59.7	64.5	61.0	65.7	65.8	65.7	66.7	
10/05/03	64.3	OFF	OFF	59.4	58.1	51.1	56.1	64.7	OFF	47.3	52.2	60.6	OFF	62.7	63.0	62.3	OFF	
10/06/03	66.5	OFF	OFF	62.7	61.4	59.8	60.7	64.5	OFF	55.2	55.9	62.8	OFF	65.3	66.7	64.5	OFF	
10/07/03	65.2	61.4	63.4	61.9	61.6	65.9	58.5	65.0	53.7	52.8	55.4	61.7	58.3	64.3	63.2	64.0	66.9	
10/08/03	65.6	63.4	65.2	59.6	61.8	56.1	58.7	63.7	58.7	53.2	53.4	61.6	60.9	63.2	64.8	62.9	64.6	
10/09/03	65.9	63.8	65.4	63.7	62.1	61.4	60.3	65.7	55.4	51.9	55.8	61.0	60.6	64.7	65.2	64.3	66.3	
10/10/03	67.3	66.0	67.2	62.2	65.0	61.1	62.4	65.4	59.2	54.7	57.1	62.6	62.7	65.1	67.4	65.0	66.4	
10/11/03	64.2	62.1	62.7	62.8	59.8	56.8	60.4	62.1	60.0	54.2	52.4	59.8	62.4	62.3	63.7	62.5	63.6	
10/12/03	65.9	63.6	65.2	62.8	61.2	57.7	60.7	62.8	56.2	50.5	57.3	64.5	60.8	65.9	65.0	64.6	64.1	
10/13/03	64.4	63.2	64.0	62.2	63.8	59.5	62.1	62.9	48.9	50.3	55.1	60.3	60.6	62.2	64.2	61.9	64.2	
10/14/03	66.9	61.3	62.9	62.6	62.7	65.1	64.7	63.8	51.5	54.8	55.8	64.9	58.1	62.5	62.5	62.5	64.7	
10/15/03	65.6	63.3	64.3	59.7	61.4	58.7	61.5	64.4	OFF	56.8	55.0	61.7	59.4	63.9	64.2	63.6	65.8	
10/16/03	65.0	63.3	65.4	60.3	63.1	63.0	64.7	64.3	OFF	59.5	56.9	60.9	62.2	64.2	65.1	63.9	65.3	
10/17/03	64.9	63.3	66.0	60.3	63.6	58.6	60.8	64.5	OFF	56.1	53.7	61.1	60.2	63.7	65.1	64.1	65.3	
10/18/03	64.1	62.3	64.3	64.4	69.0	61.9	60.6	61.4	54.4	53.9	57.8	59.8	58.9	63.7	63.9	62.9	62.8	
10/19/03	65.4	64.1	66.1	63.6	63.7	58.9	62.4	62.7	62.0	48.5	53.8	58.2	62.0	63.5	65.8	62.9	63.9	
10/20/03	63.9	63.2	66.2	60.8	62.8	61.5	62.5	61.5	OFF	52.3	57.4	57.9	60.6	61.3	66.3	60.8	62.8	
10/21/03	63.1	61.1	63.1	63.1	65.6	62.0	63.5	61.4	58.4	54.5	51.9	59.6	59.6	62.4	62.8	61.7	63.1	
10/22/03	63.3	61.6	63.3	58.6	63.1	62.3	61.1	62.2	59.0	54.9	54.6	59.6	58.9	61.8	62.8	61.4	63.2	
10/23/03	64.6	63.9	64.8	63.8	65.4	61.2	61.7	64.4	58.3	61.9	56.6	57.9	60.3	62.0	65.0	61.4	65.9	
10/24/03	64.4	63.1	65.0	63.1	62.5	58.9	61.7	63.5	62.3	55.9	56.0	59.1	60.2	62.8	64.7	62.3	65.2	
10/25/03	61.8	59.5	62.3	61.7	60.7	56.4	58.4	59.9	58.1	52.4	50.3	58.0	56.5	59.9	62.4	59.4	60.9	
10/26/03	60.5	56.7	60.2	58.7	59.2	63.9	63.1	59.1	37.6	43.2	51.5	53.8	54.1	57.1	60.8	57.1	61.0	
10/27/03	64.9	62.6	64.4	63.6	64.4	64.3	64.4	62.6	59.5	56.9	58.2	60.9	59.9	64.1	64.5	62.0	64.1	
10/28/03	65.4	63.3	64.7	66.9	64.9	63.0	61.2	63.7	59.7	58.0	58.0	61.7	60.8	62.9	65.6	62.9	65.2	
10/29/03	67.0	62.9	63.3	64.7	64.7	60.8	60.3	65.7	60.1	55.7	56.6	63.5	60.9	64.1	63.8	63.9	67.2	
10/30/03	68.2	64.5	65.2	65.5	65.8	61.0	60.3	66.0	58.4	60.1	58.1	65.1	61.5	65.7	65.5	65.3	67.0	
10/31/03	68.4	65.8	65.9	66.2	66.0	59.6	61.7	64.8	59.8	59.9	59.1	64.7	61.8	65.7	66.6	65.9	66.4	
AVERAGE	65.9	63.4	64.8	62.9	64.4	61.2	61.7	63.9	58.5	55.9	56.4	62.1	60.6	63.8	64.9	63.5	65.1	
NO./DAYS	31	29	29	31	31	31	31	31	26	31	31	31	29	31	31	31	29	

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TABLE 2. CNEL VALUES FOR NOVEMBER 2003

RMS NUMBER																		
DATE	1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	17	18	
11/01/03	64.7	62.2	62.8	55.2	60.1	63.3	60.3	61.3	52.8	54.9	56.1	59.9	59.3	61.8	63.4	61.5	62.6	
11/02/03	64.7	62.7	63.5	64.1	66.7	59.2	62.0	63.7	54.3	51.2	55.4	62.7	59.2	63.5	63.4	63.2	64.8	
11/03/03	66.2	62.5	63.5	65.8	64.1	59.9	57.9	64.8	56.1	51.2	57.5	63.4	59.1	64.5	63.3	64.3	66.0	
11/04/03	66.8	63.8	65.3	62.5	63.9	63.0	65.0	63.7	OFF	60.7	58.9	63.5	61.7	64.9	65.3	64.2	67.0	
11/05/03	66.9	64.6	65.0	60.8	63.8	61.9	63.7	64.4	48.8	58.7	58.9	63.8	62.0	64.4	65.1	63.7	65.9	
11/06/03	66.5	64.1	65.7	63.5	64.7	65.1	65.7	64.4	55.4	62.0	57.8	61.1	61.1	63.7	65.5	63.4	65.6	
11/07/03	66.0	64.2	66.0	59.3	63.0	58.9	61.5	64.7	57.7	60.7	57.8	61.9	60.9	64.2	65.9	63.8	65.9	
11/08/03	63.9	61.3	62.0	55.8	58.4	57.4	63.7	61.4	58.2	50.6	55.7	60.2	57.7	62.1	62.6	62.0	62.0	
11/09/03	66.5	65.7	65.8	59.0	63.6	61.1	59.7	65.2	56.2	53.8	56.9	61.4	61.5	64.3	67.3	63.6	65.9	
11/10/03	65.2	64.1	65.6	58.1	62.5	61.9	62.2	62.8	54.5	54.5	56.5	62.9	60.7	64.8	65.4	64.7	63.9	
11/11/03	65.0	62.3	63.9	62.0	62.9	61.2	63.6	64.3	53.8	57.4	55.4	61.8	58.9	64.0	63.6	63.2	65.8	
11/12/03	68.2	65.5	66.6	63.8	68.8	58.8	58.6	65.5	58.8	50.5	57.9	64.8	64.1	64.8	68.0	64.6	65.9	
11/13/03	66.5	64.5	65.4	60.9	63.6	63.4	62.4	64.9	58.7	58.5	59.0	63.5	61.1	64.7	65.4	64.0	66.0	
11/14/03	66.2	64.9	65.7	61.3	63.3	60.8	63.6	64.1	56.2	53.5	56.7	63.6	61.7	65.9	65.6	65.4	65.3	
11/15/03	66.0	63.3	64.7	57.4	60.3	58.7	56.2	62.6	55.7	55.0	57.4	61.9	60.0	64.3	64.5	64.1	63.6	
11/16/03	65.8	64.0	65.9	60.3	61.9	60.1	61.2	64.6	55.1	53.1	55.4	60.5	61.1	64.5	65.3	63.8	65.5	
11/17/03	66.4	64.7	65.4	64.6	65.0	63.1	63.9	64.5	58.0	51.7	57.9	64.0	60.9	64.7	65.1	64.3	65.7	
11/18/03	66.3	62.9	64.3	63.6	65.7	62.8	63.3	63.2	60.7	59.1	59.0	62.0	59.8	63.5	63.9	63.0	65.5	
11/19/03	65.2	63.0	64.1	63.2	66.6	60.8	61.5	63.1	58.5	54.6	56.5	62.1	59.7	63.3	64.0	62.9	64.7	
11/20/03	67.8	65.2	66.6	65.7	67.5	63.6	61.6	65.3	57.2	57.4	60.1	65.3	61.6	66.5	66.5	66.3	66.3	
11/21/03	67.2	66.4	67.2	62.1	62.4	62.0	61.4	65.3	59.2	56.6	58.4	63.0	62.8	65.9	68.0	65.3	66.4	
11/22/03	63.2	54.8	55.4	63.8	65.0	68.8	68.6	57.7	54.0	52.9	57.7	55.3	54.3	53.4	59.7	53.6	59.8	
11/23/03	63.3	61.0	63.2	68.5	70.8	58.7	60.1	60.4	52.0	51.7	52.2	59.7	57.7	62.2	62.2	61.7	62.2	
11/24/03	64.9	62.6	63.2	61.2	62.9	59.1	63.2	62.6	55.2	54.7	55.2	62.1	58.2	62.9	63.1	62.5	63.8	
11/25/03	66.0	64.9	65.7	63.4	65.1	62.8	63.8	65.4	57.6	55.4	57.5	64.1	62.0	65.7	65.8	65.4	66.5	
11/26/03	66.2	64.4	66.3	62.2	65.0	59.1	60.7	64.5	56.9	55.9	57.8	63.5	62.0	65.5	65.9	65.0	66.3	
11/27/03	62.5	61.7	63.8	69.8	66.1	56.6	59.7	57.8	56.8	53.3	53.7	58.4	58.5	61.1	63.8	60.5	59.8	
11/28/03	61.6	60.9	62.5	57.0	59.8	57.4	56.7	61.0	55.3	53.4	53.1	58.9	57.4	59.8	62.0	59.0	62.7	
11/29/03	61.9	60.7	62.7	59.7	64.9	56.1	60.1	60.4	54.5	54.8	53.0	59.3	57.2	60.9	62.1	60.9	61.3	
11/30/03	64.4	62.7	64.5	66.4	70.5	61.1	63.1	63.7	53.7	46.8	55.1	59.2	59.3	62.4	64.2	62.9	64.8	
AVERAGE	65.7	63.6	64.8	63.4	65.3	61.8	62.6	63.7	56.5	56.2	57.1	62.3	60.5	63.9	64.9	63.6	65.0	
NO./DAYS	30	30	30	30	30	30	30	30	29	30	30	30	30	30	30	30	30	

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TABLE 3. CNEL VALUES FOR DECEMBER 2003

RMS NUMBER																	
DATE	1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	17	18
12/01/03	65.4	64.1	65.3	65.5	65.4	64.6	63.0	63.6	58.2	53.9	57.4	62.6	60.5	64.6	65.1	64.4	64.2
12/02/03	66.3	65.0	65.0	67.0	70.5	64.4	63.0	63.7	55.7	56.6	60.5	63.4	63.0	65.3	66.2	64.7	64.9
12/03/03	64.7	62.6	64.1	67.2	70.6	60.5	61.1	64.4	59.1	56.6	57.1	61.3	59.9	63.0	63.6	62.5	65.7
12/04/03	65.6	64.1	66.0	63.9	66.1	59.7	62.2	63.6	59.2	58.1	57.2	62.2	61.7	64.9	65.6	64.2	64.1
12/05/03	67.1	65.4	67.2	67.2	65.7	65.9	61.6	64.7	57.7	59.1	57.9	62.4	62.0	65.2	66.6	64.7	65.6
12/06/03	66.2	62.9	63.5	64.5	64.8	64.7	59.0	63.0	54.9	51.3	56.7	61.4	59.0	62.2	64.0	61.8	63.6
12/07/03	65.3	63.0	63.6	58.9	65.2	51.4	47.5	64.4	51.0	53.4	54.6	62.2	59.2	63.9	63.9	63.6	65.4
12/08/03	64.2	60.6	60.7	65.0	65.4	66.8	65.0	62.5	52.8	53.2	57.4	61.1	56.9	60.6	62.7	60.3	63.9
12/09/03	67.5	62.9	63.4	66.8	66.9	61.7	64.9	62.4	62.1	59.0	60.4	65.7	59.4	64.8	64.0	64.0	63.9
12/10/03	65.9	63.9	64.9	58.4	61.0	57.7	58.8	65.0	58.9	54.8	57.6	63.3	60.7	64.6	65.0	63.9	65.9
12/11/03	69.9	63.6	63.3	65.0	66.1	68.0	64.6	62.5	59.5	57.5	58.8	61.6	60.6	62.6	66.8	61.7	64.4
12/12/03	66.3	64.3	65.1	64.5	63.5	59.0	62.7	64.1	61.1	59.4	57.0	63.7	60.5	65.0	64.6	64.6	65.5
12/13/03	64.5	60.8	61.7	65.1	65.4	59.0	60.0	61.1	55.7	52.9	54.7	61.6	57.3	62.5	61.6	62.0	62.6
12/14/03	64.0	62.7	64.1	59.6	59.3	59.4	56.9	64.3	52.8	51.6	54.9	59.9	59.6	63.1	63.6	62.4	65.4
12/15/03	65.0	61.7	63.2	62.6	61.8	61.8	62.4	61.4	55.1	53.1	54.8	62.2	58.4	62.9	62.7	62.6	63.0
12/16/03	64.2	60.4	62.3	68.9	64.5	64.4	63.0	61.3	53.3	56.9	57.4	60.5	57.6	60.4	61.2	59.8	63.3
12/17/03	63.2	60.5	63.2	60.0	64.9	60.3	60.5	61.6	55.7	55.5	53.7	59.2	57.2	59.8	62.3	59.2	63.2
12/18/03	63.5	61.2	63.4	68.0	70.3	62.5	62.5	62.9	64.5	56.3	53.6	59.7	57.6	61.7	62.8	61.3	63.2
12/19/03	63.7	62.9	63.6	64.6	63.6	58.3	60.6	63.1	59.8	57.8	56.3	59.1	58.8	62.1	64.0	61.5	64.0
12/20/03	64.9	63.1	63.9	62.8	61.7	53.3	51.5	63.3	56.6	53.0	55.2	62.2	59.4	64.4	63.4	64.0	64.5
12/21/03	64.0	63.1	64.9	61.3	62.9	62.1	61.2	64.0	53.9	52.7	54.6	60.4	60.1	63.2	64.9	62.7	65.2
12/22/03	64.8	63.1	64.6	62.4	62.3	59.8	61.9	63.3	55.0	55.4	58.9	60.5	60.0	63.2	64.5	62.7	64.7
12/23/03	65.7	64.0	65.9	63.3	64.1	62.1	62.7	64.8	60.1	59.3	58.0	62.5	61.2	64.5	65.5	63.8	66.4
12/24/03	65.3	63.0	63.8	62.7	61.9	56.6	53.6	64.3	57.5	57.0	56.5	63.0	60.5	63.9	63.9	63.5	66.4
12/25/03	64.3	62.6	63.5	60.8	64.9	56.7	55.9	60.2	57.0	58.9	56.3	61.7	60.4	62.3	65.5	62.0	63.1
12/26/03	68.5	63.7	64.9	62.9	63.9	65.4	62.0	63.0	62.1	57.5	63.7	60.9	62.5	63.1	67.4	62.6	63.4
12/27/03	63.3	57.6	61.5	61.6	61.8	64.3	61.6	59.6	52.9	49.9	56.1	54.4	56.9	55.4	63.5	54.9	62.0
12/28/03	64.0	62.0	63.8	65.6	66.8	55.7	59.1	62.6	53.2	54.0	52.7	60.8	58.4	63.7	63.1	63.2	63.4
12/29/03	65.7	63.9	64.9	59.6	60.1	58.5	60.2	64.8	57.2	55.9	58.2	63.8	60.6	64.9	65.0	64.5	66.0
12/30/03	65.6	63.4	64.9	59.2	59.2	62.0	64.3	64.3	56.4	57.4	56.8	61.8	60.6	63.3	64.8	63.1	65.7
12/31/03	64.1	61.4	62.0	62.8	65.9	61.1	60.7	62.3	55.5	58.0	56.0	60.2	57.6	61.7	62.1	61.4	64.0
AVERAGE	65.5	62.9	64.2	64.4	65.4	62.4	61.6	63.3	57.5	56.4	57.5	61.8	59.9	63.3	64.5	62.9	64.6
NO./DAYS	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
QTR. AVG.	65.7	63.3	64.6	63.6	65.0	61.8	62.0	63.6	57.5	56.1	57.0	62.1	60.3	63.7	64.8	63.3	64.9
NO./DAYS	92	90	90	92	92	92	92	92	85	92	92	92	90	92	92	92	90



## AAAI Report 1280

## Acoustical Analysis Associates, Inc.

**TABLE 5. WEEKLY SCHEDULED AIR CARRIER AND COMMUTER  
FLIGHTS FOR THE FOURTH QUARTER 2003**

SCHEDULE IN EFFECT FROM 10/01/03 - 10/03/03									
AA DEP MD80	AA ARR MD80	AS DEP MD80	AS ARR MD80	AS DEP B7377	AS ARR B7377	AS DEP B7374	AS ARR B7374	WN DEP B7373	WN ARR B7373
DAY	21	14	20	13	14	14	6	6	132
EVENING	0	14	0	7	0	0	7	7	63
NIGHT	7	0	0	0	0	0	0	0	0
TOTAL	28	28	20	20	14	14	13	13	195

SCHEDULE IN EFFECT FROM 10/01/03 - 10/03/03									
WN DEP B7375	WN ARR B7375	WN DEP B7377	WN ARR B7377	UA DEP B7373	UA ARR B7373	UA DEP B7375	UA ARR B7375	UA DEP A319	UA ARR A319
DAY	76	68	63	56	11	5	10	2	0
EVENING	0	8	13	20	0	12	0	8	0
NIGHT	0	0	0	0	6	0	0	0	0
TOTAL	76	76	76	76	17	17	10	10	0

SCHEDULE IN EFFECT FROM 10/01/03 - 10/03/03									
UA DEP A320	UA ARR A320	UA DEP RJ	UA ARR RJ	HP DEP CRJ	HP ARR CRJ	HP DEP B7372	HP ARR B7372	HP DEP B7373	HP ARR B7373
DAY	0	0	38	45	1	1	12	12	0
EVENING	0	0	7	0	0	0	0	0	7
NIGHT	0	0	0	0	0	0	0	0	0
TOTAL	0	0	45	45	1	1	12	12	7

SCHEDULE IN EFFECT FROM 10/01/03 - 10/03/03									
HP DEP CRJ7	HP ARR CRJ7	UPS DEP B757	UPS ARR B757	FE DEP A300	FE ARR A300	FE DEP A310	FE ARR A310	AQ DEP B7377	AQ ARR B7377
DAY	1	1	0	5	0	5	4	0	14
EVENING	0	0	5	0	5	0	0	0	14
NIGHT	0	0	0	0	0	0	4	4	0
TOTAL	1	1	5	5	5	5	4	4	28

SCHEDULE IN EFFECT FROM 10/01/03 - 10/03/03									
HP DEP CRJ9	HP ARR CRJ9							TOTAL DEP	TOTAL ARR
DAY	13	13							436
EVENING	0	0							114
NIGHT	0	0							20
TOTAL	13	13							570

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## Acoustical Analysis Associates, Inc.

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
AA DEP MD80	AA ARR MD80	AS DEP MD80	AS ARR MD80	AS DEP B7377	AS ARR B7377	AS DEP B7374	AS ARR B7374	WN DEP B7373	WN ARR B7373
DAY	21	14	20	13	14	14	6	6	132
EVENING	0	14	0	7	0	0	7	7	63
NIGHT	7	0	0	0	0	0	0	0	0
TOTAL	28	28	20	20	14	14	13	13	195

SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
WN DEP B7375	WN ARR B7375	WN DEP B7377	WN ARR B7377	UA DEP B7373	UA ARR B7373	UA DEP B7375	UA ARR B7375	UA DEP A319	UA ARR A319
DAY	76	68	63	56	11	5	10	2	0
EVENING	0	8	13	20	0	12	0	8	0
NIGHT	0	0	0	0	6	0	0	0	0
TOTAL	76	76	76	76	17	17	10	10	0

SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
UA DEP A320	UA ARR A320	UA DEP RJ	UA ARR RJ	HP DEP CRJ	HP ARR CRJ	HP DEP B7372	HP ARR B7372	HP DEP B7373	HP ARR B7373
DAY	0	0	39	46	1	1	12	12	0
EVENING	0	0	7	0	0	0	0	0	7
NIGHT	0	0	0	0	0	0	0	0	0
TOTAL	0	0	46	46	1	1	12	12	7

SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
HP DEP CRJ7	HP ARR CRJ7	UPS DEP B757	UPS ARR B757	FE DEP A300	FE ARR A300	FE DEP A310	FE ARR A310	AQ DEP B7377	AQ ARR B7377
DAY	1	1	0	5	0	5	4	0	14
EVENING	0	0	5	0	5	0	0	0	14
NIGHT	0	0	0	0	0	0	4	4	0
TOTAL	1	1	5	5	5	5	4	4	28

SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
HP DEP CRJ9	HP ARR CRJ9								
DAY	13	13							437
EVENING	0	0							114
NIGHT	0	0							20
TOTAL	13	13							571

TABLE 5. (CONTINUED)

	SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
	AA	AA	AS	AS	AS	AS	AS	AS	WN	WN
	DEP MD80	ARR MD80	DEP MD80	ARR MD80	DEP B7377	ARR B7377	DEP B7374	ARR B7374	DEP B7373	ARR B7373
DAY	21	14	20	13	14	14	6	6	132	132
EVENING	0	14	0	7	0	0	7	7	63	63
NIGHT	7	0	0	0	0	0	0	0	0	0
TOTAL	28	28	20	20	14	14	13	13	195	195

	SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
	WN	WN	WN	WN	UA	UA	UA	UA	UA	UA
	DEP B7375	ARR B7375	DEP B7377	ARR B7377	DEP B7373	ARR B7373	DEP B7375	ARR B7375	DEP A319	ARR A319
DAY	76	68	63	56	11	5	10	2	0	0
EVENING	0	8	13	20	0	12	0	8	0	0
NIGHT	0	0	0	0	6	0	0	0	0	0
TOTAL	76	76	76	76	17	17	10	10	0	0

	SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
	UA	UA	UA	UA	HP	HP	HP	HP	HP	HP
	DEP A320	ARR A320	DEP RJ	ARR RJ	DEP CRJ	ARR CRJ	DEP B7372	ARR B7372	DEP B7373	ARR B7373
DAY	0	0	39	46	1	1	12	12	0	0
EVENING	0	0	7	0	0	0	0	0	0	7
NIGHT	0	0	0	0	0	0	0	0	7	0
TOTAL	0	0	46	46	1	1	12	12	7	7

	SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03									
	HP	HP	UPS	UPS	FE	FE	FE	FE	AQ	AQ
	DEP CRJ7	ARR CRJ7	DEP B757	ARR B757	DEP A300	ARR A300	DEP A310	ARR A310	DEP B7377	ARR B7377
DAY	1	1	0	5	0	5	4	0	14	14
EVENING	0	0	5	0	5	0	0	0	14	14
NIGHT	0	0	0	0	0	0	0	4	0	0
TOTAL	1	1	5	5	5	5	4	4	28	28

	SCHEDULE IN EFFECT FROM 10/04/03 - 10/25/03			
	HP	HP	TOTAL	TOTAL
	DEP CRJ9	ARR CRJ9	DEP	ARR
DAY	13	13	437	407
EVENING	0	0	114	160
NIGHT	0	0	20	4
TOTAL	13	13	571	571

TABLE 5. (CONTINUED)

	SCHEDULE IN EFFECT FROM				10/26/03 - 10/30/03					
	AA	AA	AS	AS	AS	AS	AS	AS	WN	WN
	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR
	MD80	MD80	MD80	MD80	B7377	B7377	B7374	B7374	B7373	B7373
DAY	21	14	27	27	0	0	13	6	132	132
EVENING	0	14	7	7	0	0	0	7	63	63
NIGHT	7	0	0	0	0	0	0	0	0	0
TOTAL	28	28	34	34	0	0	13	13	195	195

	SCHEDULE IN EFFECT FROM				10/26/03 - 10/30/03					
	WN	WN	WN	WN	UA	UA	UA	UA	UA	UA
	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR
	B7375	B7375	B7377	B7377	B7373	B7373	B7375	B7375	A319	A319
DAY	76	68	63	56	11	5	10	2	0	0
EVENING	0	8	13	20	0	12	0	8	0	0
NIGHT	0	0	0	0	6	0	0	0	0	0
TOTAL	76	76	76	76	17	17	10	10	0	0

	SCHEDULE IN EFFECT FROM					10/26/03 - 10/30/03				
	UA DEP A320	UA ARR A320	UA DEP RJ	UA ARR RJ	HP DEP CRJ	HP ARR CRJ	HP DEP B7372	HP ARR B7372	HP DEP B7373	HP ARR B7373
DAY	0	0	39	46	0	0	12	12	0	0
EVENING	0	0	7	0	0	0	0	7	0	0
NIGHT	0	0	0	0	0	0	7	0	0	0
TOTAL	0	0	46	46	0	0	19	19	0	0

	SCHEDULE IN EFFECT FROM				10/26/03 - 10/30/03					
	HP	HP	UPS	UPS	FE	FE	FE	FE	AQ	AQ
	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR
	CRJ7	CRJ7	B757	B757	A300	A300	A310	A310	B7377	B7377
DAY	7	7	0	5	0	5	4	0	14	14
EVENING	0	0	5	0	5	0	0	0	14	14
NIGHT	0	0	0	0	0	0	0	4	0	0
TOTAL	7	7	5	5	5	5	4	4	28	28

SCHEDULE IN EFFECT FROM			10/26/03 - 10/30/03	
	HP DEP CRJ9	HP ARR CRJ9	TOTAL DEP	TOTAL ARR
DAY	8	8	437	407
EVENING	0	0	114	160
NIGHT	0	0	20	4
TOTAL	8	8	571	571

TABLE 5. (CONTINUED)

	SCHEDULE IN EFFECT FROM 10/31/03 - 10/31/03									
	AA	AA	AS	AS	AS	AS	AS	AS	WN	WN
	DEP MD80	ARR MD80	DEP MD80	ARR MD80	DEP B7377	ARR B7377	DEP B7374	ARR B7374	DEP B7373	ARR B7373
DAY	21	14	27	27	0	0	13	6	132	132
EVENING	0	14	7	7	0	0	0	7	63	63
NIGHT	7	0	0	0	0	0	0	0	0	0
TOTAL	28	28	34	34	0	0	13	13	195	195

	SCHEDULE IN EFFECT FROM 10/31/03 - 10/31/03									
	WN	WN	WN	WN	UA	UA	UA	UA	UA	UA
	DEP B7375	ARR B7375	DEP B7377	ARR B7377	DEP B7373	ARR B7373	DEP B7375	ARR B7375	DEP E120	ARR E120
DAY	76	68	63	56	12	6	9	1	2	2
EVENING	0	8	13	20	0	12	0	8	0	0
NIGHT	0	0	0	0	6	0	0	0	0	0
TOTAL	76	76	76	76	18	18	9	9	2	2

	SCHEDULE IN EFFECT FROM 10/31/03 - 10/31/03									
	UA	UA	UA	UA	HP	HP	HP	HP	HP	HP
	DEP A320	ARR A320	DEP RJ	ARR RJ	DEP CRJ	ARR CRJ	DEP B7372	ARR B7372	DEP B7373	ARR B7373
DAY	0	0	39	46	0	0	12	12	0	0
EVENING	0	0	7	0	0	0	0	7	0	0
NIGHT	0	0	0	0	0	0	7	0	0	0
TOTAL	0	0	46	46	0	0	19	19	0	0

	SCHEDULE IN EFFECT FROM 10/31/03 - 10/31/03									
	HP	HP	UPS	UPS	FE	FE	FE	FE	AQ	AQ
	DEP CRJ7	ARR CRJ7	DEP B757	ARR B757	DEP A300	ARR A300	DEP A310	ARR A310	DEP B7377	ARR B7377
DAY	7	7	0	5	0	5	4	0	14	14
EVENING	0	0	5	0	5	0	0	0	14	14
NIGHT	0	0	0	0	0	0	0	4	0	0
TOTAL	7	7	5	5	5	5	4	4	28	28

	SCHEDULE IN EFFECT FROM 10/31/03 - 10/31/03			
	HP	HP	TOTAL	TOTAL
	DEP CRJ9	ARR CRJ9	DEP	ARR
DAY	8	8	439	409
EVENING	0	0	114	160
NIGHT	0	0	20	4
TOTAL	8	8	573	573

TABLE 5. (CONTINUED)

	SCHEDULE IN EFFECT FROM 11/01/03 - 12/06/03									
	AA	AA	AS	AS	AS	AS	AS	AS	WN	WN
	DEP MD80	ARR MD80	DEP MD80	ARR MD80	DEP B7377	ARR B7377	DEP B7374	ARR B7374	DEP B7373	ARR B7373
DAY	28	14	27	27	0	0	13	6	132	132
EVENING	0	14	7	7	0	0	0	7	63	63
NIGHT	0	0	0	0	0	0	0	0	0	0
TOTAL	28	28	34	34	0	0	13	13	195	195

	SCHEDULE IN EFFECT FROM 11/01/03 - 12/06/03									
	WN	WN	WN	WN	UA	UA	UA	UA	UA	UA
	DEP B7375	ARR B7375	DEP B7377	ARR B7377	DEP B7373	ARR B7373	DEP B7375	ARR B7375	DEP E120	ARR E120
DAY	76	68	63	56	12	6	9	1	2	2
EVENING	0	8	13	20	0	12	0	8	0	0
NIGHT	0	0	0	0	6	0	0	0	0	0
TOTAL	76	76	76	76	18	18	9	9	2	2

	SCHEDULE IN EFFECT FROM 11/01/03 - 12/06/03									
	UA	UA	UA	UA	HP	HP	HP	HP	HP	HP
	DEP A320	ARR A320	DEP RJ	ARR RJ	DEP CRJ	ARR CRJ	DEP B7372	ARR B7372	DEP B7373	ARR B7373
DAY	0	0	39	46	0	0	12	12	0	0
EVENING	0	0	7	0	0	0	0	7	0	0
NIGHT	0	0	0	0	0	0	7	0	0	0
TOTAL	0	0	46	46	0	0	19	19	0	0

	SCHEDULE IN EFFECT FROM 11/01/03 - 12/06/03									
	HP	HP	UPS	UPS	FE	FE	FE	FE	AQ	AQ
	DEP CRJ7	ARR CRJ7	DEP B757	ARR B757	DEP A300	ARR A300	DEP A310	ARR A310	DEP B7377	ARR B7377
DAY	7	7	0	5	0	5	4	0	14	14
EVENING	0	0	5	0	5	0	0	0	14	14
NIGHT	0	0	0	0	0	0	0	4	0	0
TOTAL	7	7	5	5	5	5	4	4	28	28

	SCHEDULE IN EFFECT FROM 11/01/03 - 12/06/03			
	HP	HP	TOTAL	TOTAL
	DEP CRJ9	ARR CRJ9	DEP	ARR
DAY	8	8	446	409
EVENING	0	0	114	160
NIGHT	0	0	13	4
TOTAL	8	8	573	573

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 12/07/03 - 12/14/03									
AA DEP MD80	AA ARR MD80	AS DEP MD80	AS ARR MD80	AS DEP B7377	AS ARR B7377	AS DEP B7374	AS ARR B7374	WN DEP B7373	WN ARR B7373
DAY	28	14	27	27	0	0	13	6	132
EVENING	0	14	7	7	0	0	0	7	63
NIGHT	0	0	0	0	0	0	0	0	0
TOTAL	28	28	34	34	0	0	13	13	195

SCHEDULE IN EFFECT FROM 12/07/03 - 12/14/03									
WN DEP B7375	WN ARR B7375	WN DEP B7377	WN ARR B7377	UA DEP B7373	UA ARR B7373	UA DEP B7375	UA ARR B7375	UA DEP E120	UA ARR E120
DAY	76	68	63	56	12	6	9	1	2
EVENING	0	8	13	20	0	12	0	8	0
NIGHT	0	0	0	0	6	0	0	0	0
TOTAL	76	76	76	76	18	18	9	9	2

SCHEDULE IN EFFECT FROM 12/07/03 - 12/14/03									
UA DEP A320	UA ARR A320	UA DEP RJ	UA ARR RJ	HP DEP CRJ	HP ARR CRJ	HP DEP B7372	HP ARR B7372	HP DEP B7373	HP ARR B7373
DAY	0	0	39	46	1	1	6	6	0
EVENING	0	0	7	0	0	0	0	6	0
NIGHT	0	0	0	0	0	0	6	0	1
TOTAL	0	0	46	46	1	1	12	12	1

SCHEDULE IN EFFECT FROM 12/07/03 - 12/14/03									
HP DEP CRJ7	HP ARR CRJ7	UPS DEP B757	UPS ARR B757	FE DEP A300	FE ARR A300	FE DEP A310	FE ARR A310	AQ DEP B7377	AQ ARR B7377
DAY	7	7	0	5	0	5	4	0	14
EVENING	0	0	5	0	5	0	0	0	14
NIGHT	0	0	0	0	0	0	4	0	0
TOTAL	7	7	5	5	5	5	4	4	28

SCHEDULE IN EFFECT FROM 12/07/03 - 12/14/03									
HP DEP CRJ9	HP ARR CRJ9							TOTAL DEP	TOTAL ARR
DAY	13	13							446
EVENING	0	0							114
NIGHT	0	0							13
TOTAL	13	13							573

TABLE 5. (CONTINUED)

	SCHEDULE IN EFFECT FROM 12/15/03 - 12/19/03									
	AA DEP MD80	AA ARR MD80	AS DEP MD80	AS ARR MD80	AS DEP B7377	AS ARR B7377	AS DEP B7374	AS ARR B7374	WN DEP B7373	WN ARR B7373
DAY	28	14	27	27	0	0	13	6	132	132
EVENING	0	14	7	7	0	0	0	7	63	63
NIGHT	0	0	0	0	0	0	0	0	0	0
TOTAL	28	28	34	34	0	0	13	13	195	195

	SCHEDULE IN EFFECT FROM 12/15/03 - 12/19/03									
	WN DEP B7375	WN ARR B7375	WN DEP B7377	WN ARR B7377	UA DEP B7373	UA ARR B7373	UA DEP B7375	UA ARR B7375	UA DEP E120	UA ARR E120
DAY	76	68	63	56	21	7	0	0	0	0
EVENING	0	8	13	20	0	14	0	7	0	0
NIGHT	0	0	0	0	0	0	7	0	0	0
TOTAL	76	76	76	76	21	21	7	7	0	0

	SCHEDULE IN EFFECT FROM 12/15/03 - 12/19/03									
	UA DEP A320	UA ARR A320	UA DEP RJ	UA ARR RJ	HP DEP CRJ	HP ARR CRJ	HP DEP B7372	HP ARR B7372	HP DEP B7373	HP ARR B7373
DAY	0	0	42	49	1	1	6	6	0	0
EVENING	0	0	7	0	0	0	0	6	0	1
NIGHT	0	0	0	0	0	0	6	0	1	0
TOTAL	0	0	49	49	1	1	12	12	1	1

	SCHEDULE IN EFFECT FROM 12/15/03 - 12/19/03									
	HP DEP CRJ7	HP ARR CRJ7	UPS DEP B757	UPS ARR B757	FE DEP A300	FE ARR A300	FE DEP A310	FE ARR A310	AQ DEP B7377	AQ ARR B7377
DAY	7	7	0	5	0	5	4	0	14	14
EVENING	0	0	5	0	5	0	0	0	14	14
NIGHT	0	0	0	0	0	0	0	4	0	0
TOTAL	7	7	5	5	5	5	4	4	28	28

	SCHEDULE IN EFFECT FROM 12/15/03 - 12/19/03			
	HP DEP CRJ9	HP ARR CRJ9	TOTAL DEP	TOTAL ARR
DAY	13	13	447	410
EVENING	0	0	114	161
NIGHT	0	0	14	4
TOTAL	13	13	575	575

TABLE 5. (CONTINUED)

	SCHEDULE IN EFFECT FROM 12/20/03 - 12/31/03									
	AA	AA	AS	AS	AS	AS	AS	AS	WN	WN
	DEP MD80	ARR MD80	DEP MD80	ARR MD80	DEP B7377	ARR B7377	DEP B7374	ARR B7374	DEP B7373	ARR B7373
DAY	28	14	27	27	0	0	13	6	132	132
EVENING	0	14	7	7	0	0	0	7	63	63
NIGHT	0	0	0	0	0	0	0	0	0	0
TOTAL	28	28	34	34	0	0	13	13	195	195

	SCHEDULE IN EFFECT FROM 12/20/03 - 12/31/03									
	WN	WN	WN	WN	UA	UA	UA	UA	UA	UA
	DEP B7375	ARR B7375	DEP B7377	ARR B7377	DEP B7373	ARR B7373	DEP B7375	ARR B7375	DEP E120	ARR E120
DAY	76	68	63	56	21	7	0	0	0	0
EVENING	0	8	13	20	0	14	0	7	0	0
NIGHT	0	0	0	0	0	0	7	0	0	0
TOTAL	76	76	76	76	21	21	7	7	0	0

	SCHEDULE IN EFFECT FROM 12/20/03 - 12/31/03									
	HP	HP	UA	UA	HP	HP	HP	HP	HP	HP
	DEP A320	ARR A320	DEP RJ	ARR RJ	DEP CRJ	ARR CRJ	DEP B7372	ARR B7372	DEP B7373	ARR B7373
DAY	0	0	42	49	2	2	6	6	0	0
EVENING	0	7	7	0	0	0	0	0	0	0
NIGHT	7	0	0	0	0	0	0	0	0	0
TOTAL	7	7	49	49	2	2	6	6	0	0

	SCHEDULE IN EFFECT FROM 12/20/03 - 12/31/03									
	HP	HP	UPS	UPS	FE	FE	FE	FE	AQ	AQ
	DEP CRJ7	ARR CRJ7	DEP B757	ARR B757	DEP A300	ARR A300	DEP A310	ARR A310	DEP B7377	ARR B7377
DAY	6	6	0	5	0	5	4	0	14	14
EVENING	0	0	5	0	5	0	0	0	14	14
NIGHT	0	0	0	0	0	0	0	4	0	0
TOTAL	6	6	5	5	5	5	4	4	28	28

	SCHEDULE IN EFFECT FROM 12/20/03 - 12/31/03			
	HP	HP	TOTAL	TOTAL
	DEP CRJ9	ARR CRJ9	DEP	ARR
DAY	13	13	447	410
EVENING	0	0	114	161
NIGHT	0	0	14	4
TOTAL	13	13	575	575

TABLE 5. (CONTINUED)

FOURTH QUARTER 2003

PERIOD TOTALS FOR  
AIR CARRIERS AND COMMUTERS

## AIR CARRIERS

	<u>DEP</u>	<u>ARR</u>
DAY	5824	5369
EVE	1499	2105
NIGHT	<u>204</u>	<u>53</u>
TOTAL	7527	7527

## COMMUTERS

	<u>DEP</u>	<u>ARR</u>
DAY	0	0
EVE	0	0
NIGHT	<u>0</u>	<u>0</u>
TOTAL	0	0

## AIR CARRIERS AND COMMUTERS

	<u>DEP</u>	<u>ARR</u>
DAY	5824	5869
EVE	1499	2105
NIGHT	<u>204</u>	<u>53</u>
TOTAL	7527	7527

## VI. INCOMPATIBLE LAND USE

The contours shown in Figures 1 and 2 were digitized and overlaid on a digital land use map of the area around the Airport. The total areas enclosed by the 65 and 70 dB CNEL contours were 1,166.5 and 453.1 acres, respectively. The areas of incompatible land uses enclosed by the contours were then computed. The incompatible land use areas were 143.9 acres within the 65 dB contour of which 9.68 acres were also within the 70 dB contour.

It should be noted that the above incompatible land areas do not include the soundproofed schools in the vicinity of the Airport (the Luther Burbank Middle School, St. Patrick and Glenwood Schools). The above incompatible land use areas also do not include those residences to which the Airport has acquired avigation easements. Within the 65 dB contour, the Airport has acquired avigation easements, through its ongoing sound insulation program, to 660 parcels of land. Those 660 parcels total 97.90 acres. Eighty-five of the 660 parcels, totaling 12.58 acres, are also located within the 70 dB contour. Within the 65 dB contour, the Airport has also acquired avigation easements, under the Court of Appeal decision in Baker v. Burbank-Glendale-Pasadena Airport Authority, 220 Cal. App. 3d 1602 (1990), to 59 parcels of land. For 41 of the 59 parcels, the Authority has acquired avigation easements both through Baker and through its ongoing sound insulation program. Those 41 parcels are included in the total number of sound insulation program avigation easements set forth above. The 18 remaining Baker easement parcels total 3.05 acres. Five of those parcels, totaling 0.697 acres, are located within the 70 dB contour.

It should be noted that the Airport Authority has made repeated attempts over the past several years to acoustically treat and obtain avigation easements at 361 residential parcels, totaling 54.53 acres of the incompatible land use area within the 65 dB contour. Owners of these parcels have either refused to respond to notices regarding the sound insulation program, have withdrawn from the program, or own properties with major building code deficiencies that prevent them from participating.

The estimated numbers of residences are 1,428 within the 65 dB contour, and 65 within the 70 dB contour. The estimated numbers of people residing within the 65 and 70 dB CNEL contours are 3,856 and 176, respectively<sup>2</sup>.

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<sup>2</sup> The Authority has implemented the use of state of the art Geographic Information System (GIS) technology and has changed the methodology for estimating the quantity and acreage of residential units within the 65 dB and 70 dB contours beginning with the "Quarterly Noise Monitoring at Burbank Airport First Quarter 2003 Report." The estimates are now derived from GIS data based on Los Angeles County Assessor records that is utilized by Authority consultant PSOMAS. The methodology for estimating the number of people residing within the 65 and 70 dB contours remains unchanged.

## REFERENCES

1. California Department of Transportation, Division of Aeronautics, "Noise Standards", California Code of Regulations, Title 21, Chapter 2.5, Subchapter 6.
2. L-30488, Department of Transportation, State of California, 27 June 1984.
3. "Quarterly Noise Monitoring at Burbank Airport, First Quarter 2003", AAAI Report 1277.
4. "Quarterly Noise Monitoring at Burbank Airport, Second Quarter 2003", AAAI Report 1278.
5. "Quarterly Noise Monitoring at Burbank Airport, Third Quarter 2003", AAAI Report 1279.

**APPENDIX A**  
**NOISE MONITOR INSTRUMENTATION**

## APPENDIX A

### NOISE MONITOR INSTRUMENTATION

The permanent noise monitor system, manufactured by Tracor, consists of 17 remote monitoring stations (RMS) connected to a central site by telephone lines. The system block diagram showing the major elements is shown in Figure A-1. The electrical signal generated by the microphone/preamplifier assembly at each site is processed in the RMS electronics. The signal is passed through an A-weighting filter and is then detected and converted to a digital level signal in decibels with a resolution of 0.1 dB.

The digitized sound level is transmitted every half second by telephone line to the central site. The data received by the central site are processed by the computer. According to preset parameters, the noise is separated into two categories--aircraft noise and community noise. Each event attributed to an aircraft is saved in a noise event file. Computations are made of hourly noise level, community noise equivalent level, runway use, and other parameters. A wide variety of data presentations is available by exercising a number of routines provided by Tracor, as well as special-purpose routines that can be generated by the user.

The locations of the remote sites (shown in Figure 3) are listed relative to the runway thresholds in Table A-1.

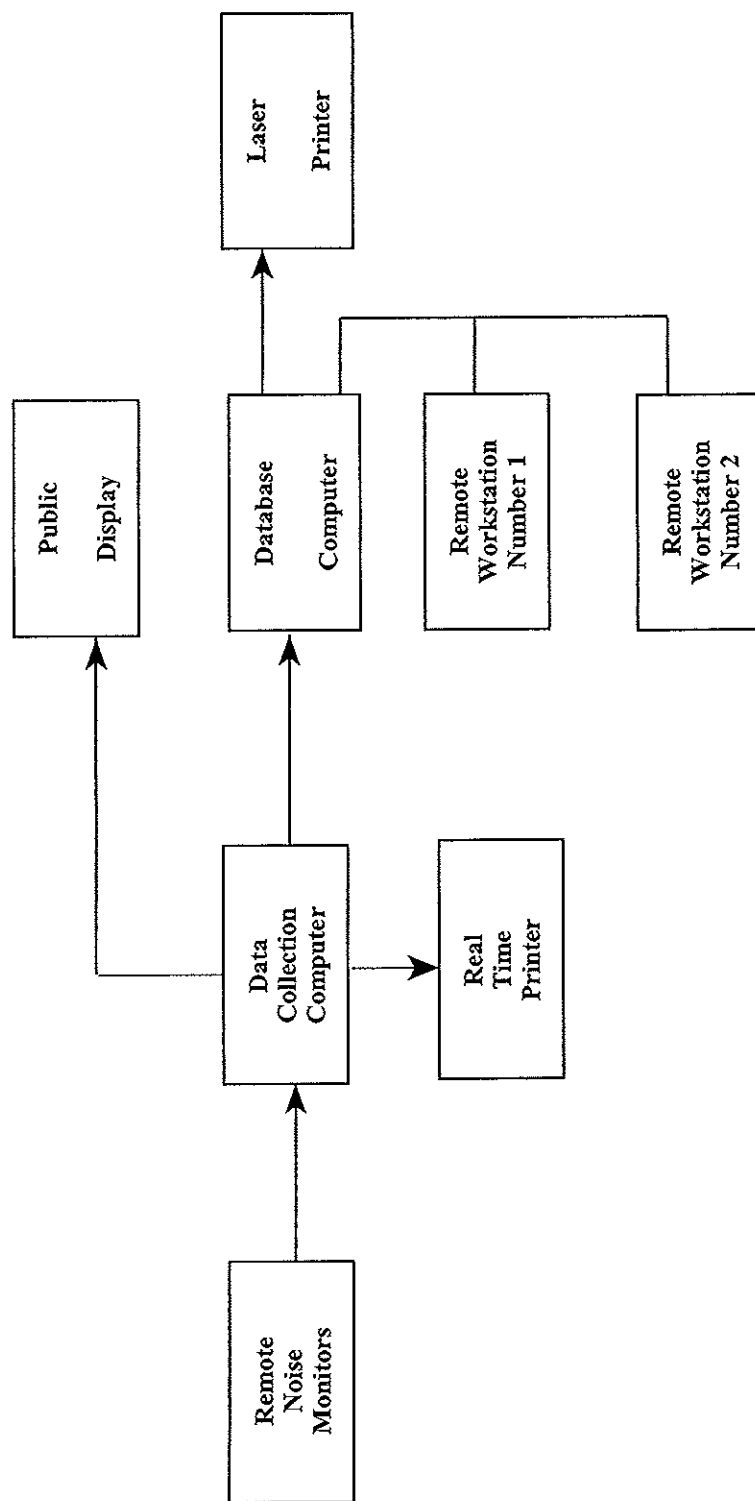


FIGURE A-1. PERMANENT NOISE MONITOR SYSTEM BLOCK DIAGRAM

TABLE A-1  
NOISE MONITOR SITE LOCATIONS

<u>Site No.</u>	<u>Distance From N. End of RW 15</u>	<u>Distance From Extended Centerline</u>
1	8590	-1490
2	10830	1590
3	13440	-1090
4	-150	1200
5	-810	1100
6	-3280	-740
7	-4720	-50
12	7520	-3320
13	10660	-3600
14	12780	1160
15	13380	-3920
16	11600	360
17	12900	-3520

Note: Positive distances from the runway threshold are to the south; positive distances from the extended centerline are to the east.

<u>Site No.</u>	<u>Distance From W. End of RW 8</u>	<u>Distance From Extended Centerline</u>
9	-8805	225
10	8180	-880
11	8740	-110
18	-5880	-440

Note: Positive distances from the runway threshold are to the east; positive distances from the extended centerline are to the north.

**APPENDIX B  
CALIBRATION**

## **APPENDIX B CALIBRATION**

The system was calibrated during setup using a Bruel and Kjaer pistonphone. Acoustic calibrations are being performed approximately every six months. Electrical calibrations are performed automatically shortly after midnight each day. Figure B-1 shows the latest calibration certificate of the pistonphone employed in the acoustic calibrations and Figure B-2 shows a typical electrical calibration.

**Odin Metrology, Inc.**

Calibration of Brüel &amp; Kjær

Certificate: 11417-2  
4228 Rev 10 August, 2002

## Certificate of Calibration For Brüel & Kjær Pistonphone

**MEASUREMENT STANDARDS**

This calibration is performed by comparison with Measurement Standard Pistonphones:

Type	4220	Serial Number	1048473
Calibrated by	TS (Brüel & Kjær)	Due Date	10 AUG 2003
Cal Interval	12 months		

Type	4220	Serial Number	1048795
Calibrated by	TS (Brüel & Kjær)	Due Date	10 AUG 2003
Cal Interval	12 Months		

- a) Estimated uncertainty of comparison:  
± 0.04 dB at 99% confidence level.
- b) Estimated uncertainty of Calibration Service  
Standard Pistonphone:  
± 0.09 dB at 99% confidence level.
- c) Absolute uncertainty:  
Sq. Root ( $a^2+b^2$ ) = 0.10 dB at 99% confidence level.

If the Ambient Pressure  $P_a$  deviates from the above stated nominal value, 1013 mbar, a correction  $\Delta$ SPL should be added to the calibrated Sound Pressure Level.

$$\Delta \text{SPL} = 20 \times \log_{10} P_a (\text{hPa}) / 1013$$

This acoustic calibrator has been calibrated using standards with values traceable to the National Institute of Standards and Technology.

The calibration of this acoustic calibrator was accomplished using a test system which conforms to the requirements of ANSI/NCISLZ540-1, ISO Guide 25 and the guidelines of ISO 10012-1.

Calibration performed by

*Harold Lynch*

Harold Lynch, Service Manager

**ODIN METROLOGY, INC.**

CALIBRATION OF BRÜEL & KJÆR INSTRUMENTS  
3533 OLD CONEJO ROAD, SUITE 125  
THOUSAND OAKS, CA 91320  
PHONE: (805) 375-0830; FAX: (805) 375-0405

Note: This calibration report shall not be reproduced, except in full, without written consent of Odin Metrology, Inc.

Calibrator Type	4228
Serial Number	2245246
Submitted by	AAA Inc
Purchase Order Number	Verbal
Asset Number	N/A

This calibrator has been found to perform within manufacturer's specifications of the Sound Pressure Level produced in the coupler terminated by a loading volume of 1,333 cm<sup>3</sup> at 1013 mbar, 20°C, and 65% RH to be 124.0 dB ± 0.15dB at a frequency of 251.2 Hz ± 0.1% and a second harmonic distortion of <3%.

This calibration is traceable to:  
NIST Test Number 822/265357-01, D1164.

**Condition of Test:**

Ambient Pressure	989.82	hPa
Temperature	23°	C
Relative Humidity	26	%
Date of Calibration	31 MAR 2003	
Re-calibration due on	31 MAR 2004	

**PERFORMANCE AS RECEIVED:**

SPL	124.07	dB re 20 µPa
Frequency	251.16	Hz
Distortion	0.5	%
HF Noise	-54	dB re 124 dB
Battery Voltage	9.2	VOLT

Was repair or adjustment performed?	No!
Were parts replaced?	No!
Were batteries replaced?	No!

**FINAL PERFORMANCE:**

SPL	124.07	dB re 20 µPa
Frequency	251.16	Hz
Distortion	0.5	%
HF Noise	-54	dB re 124 dB

Note: This pistonphone was within manufacturer's specifications as received.

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## \* Calibration Report \*

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Calibration RMS: 1 Passed Peak:109.9 dB @ 01/25/2003 0:06  
Calibration RMS: 2 Passed Peak:110.0 dB @ 01/25/2003 0:06  
Calibration RMS: 3 Passed Peak:109.8 dB @ 01/25/2003 0:06  
Calibration RMS: 4 Passed Peak:109.8 dB @ 01/25/2003 0:06  
Calibration RMS: 5 Passed Peak:110.1 dB @ 01/25/2003 0:06  
Calibration RMS: 6 Passed Peak:109.9 dB @ 01/25/2003 0:06  
Calibration RMS: 7 Passed Peak:109.9 dB @ 01/25/2003 0:06  
Calibration RMS: 9 Passed Peak:109.8 dB @ 01/25/2003 0:06  
Calibration RMS:10 Passed Peak:110.0 dB @ 01/25/2003 0:06  
Calibration RMS:11 Passed Peak:110.0 dB @ 01/25/2003 0:06  
Calibration RMS:12 Passed Peak:110.0 dB @ 01/25/2003 0:06  
Calibration RMS:13 Passed Peak:110.0 dB @ 01/25/2003 0:06  
Calibration RMS:14 Passed Peak:109.9 dB @ 01/25/2003 0:06  
Calibration RMS:15 Passed Peak:109.9 dB @ 01/25/2003 0:06  
Calibration RMS:16 Passed Peak:109.8 dB @ 01/25/2003 0:06  
Calibration RMS:17 Passed Peak:109.8 dB @ 01/25/2003 0:06  
Calibration RMS:18 Passed Peak:109.9 dB @ 01/25/2003 0:06

**Figure B-2. Typical Daily Electrical Calibration**